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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
|-----------------|-------------|----------------------|---------------------|------------------|

10/542,052

07/11/2005

Kazuhiro Yamada

2005_0978A

6373

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EXAMINER

SAJOUS, WESNER

ART UNIT

PAPER NUMBER

2628

MAIL DATE

DELIVERY MODE

01/28/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/542,052

Applicant(s)

YAMADA, KAZUHIRO

Examiner

Sajous Wesner

Art Unit

2628

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1,3,4 and 6-11 is/are rejected.
- 7) ☒ Claim(s) 2 and 5 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 11 July 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date <u>7/11/05 & 9/24/07</u> . | 6) <input type="checkbox"/> Other: ____ |

DETAILED ACTION

This is a first Office Action on the merit. Claims 1-11 are presented for examination.

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

2. Claims 1, 3-4 are rejected under 35 U.S.C. 102(e) as being anticipated by De Haan (US 20060055829).

Considering claims 1 and 3, De Haan discloses an image signal processing method for performing nonlinear compensation on an image signal to be fed into a display device comprises changing characteristics of the nonlinear compensation according to brightness of a place in which the display device is installed, wherein

characteristics of the nonlinear compensation is set so that brightness human beings feel is linear with respect to the image signal before compensation. See paragraphs 64-66.

Re claim 4, Dehaan discloses an image signal processing method for performing nonlinear compensation on an image signal to be fed into a display device comprises changing characteristics of the nonlinear compensation according to brightness of a place in which the display device is installed and a maximum luminance the display device displays. See paragraphs 64-66 in light of paragraph 23 characterizing the nonlinear compensation over the maximum luminance the display displays.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 6-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over De Hann in view of Kuwata et al. (US 20020044122).

Considering claim 6, De Haan discloses the system of claim 6 (as set forth in the rejections of claim 1 above) including the intrinsic provision of an ambient light detector (see paragraph 23); a compensator (300) that performs nonlinear compensation on the

image signal before compensation to convert to an image signal after compensation based on detected ambient light (see paragraphs 64-66, wherein the transfer-functions performed are based on luminance to light transfer characteristics and gamma corrections of the display device (see paragraphs 56-62, which encompasses the nonlinear compensation to convert to an image signal after compensation based on detected ambient light); and a plurality of LUTS (associated with unit 306) with different nonlinear compensation characteristics (see paragraph 56).

The difference between claim 6 and De Haan is the citations of look-up table selector (57, fig. 13) that selects one look-up table from among a plurality of look-up tables [according to detected ambient light (e.g., lightness), which is disclosed by Kuwata (see paragraphs 4, 132-133)

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the display device of De Haan to include the look-up table selector of Kuwata; in order to give the appropriate contrast and ensure adequate image processing according to the environmental conditions, in which the color LCD panel 20 is used. This improves the picture quality of the resulting displayed image on the color LCD panel 20. See Kuwata paragraph 136.

Re claim 8, De Haan in view of Kuwata discloses the function of the plurality of LUTs and LUT selector is achieved by using a processor (52b, fig. 12 or paragraph 132 of Kuwata) or (item 300, paragraphs 56-63 of De Haan). See claim 6 for reasons of obviousness.

Claim 9 is rejected under the same rationale as claim 6.

The invention of claim 7 contains features that are analogous to the limitations recited in claim 6. As the limitations of claim 6 have been found obvious over the combined teachings of De Haan and Kuwata, it is readily apparent that the applied prior art performs the underlying elements. As such, the limitations of claim 7 are, therefore, rejected under the same rationale as claim 6.

Claim 10 is rejected under the same rationale as claim 8.

Claim 11 is rejected under the same rationale as claim 7.

5. (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 3 are rejected under 35 U.S.C. 102(b) as being anticipated by Koyama (US 20020180677).

Considering claims 1 and 3, Koyama discloses an image signal processing method for performing nonlinear compensation on an image signal to be fed into a display device comprises changing characteristics of the nonlinear compensation according to brightness of a place in which the display device is installed, wherein characteristics of the nonlinear compensation is set so that brightness human beings feel is linear with respect to the image signal before compensation. See abstract and paragraphs 4, 19, and 69.

Allowable Subject Matter

6. Claims 2 and 5 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims, because the prior art of record fail to teach an image signal processing, wherein in the nonlinear compensation, an image signal after compensation is an image signal proportional to the image signal before compensation raised to a Y-th power ($Y > 1$); and as the place in which the display device is installed is brighter, a value of Y is set smaller (as recited in claim 2), and as the maximum luminance the display device can display is larger, the value of Y is set larger (as recited in claim 5).

Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Shigeta (US 20050078101) discloses an image processing device that is capable of nonlinear correction such as digamma correction for canceling gamma correction of correcting characteristics of a display element (see paragraph 226).


8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sajous Wesner whose telephone number is 571-272-7791. The examiner can normally be reached on M-F 9:15-6:45.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Razavi can be reached on 571-272-7664. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.


Sajous Wesner
Primary Examiner
Art Unit 2628

WS
1/21/08